












2030 Alternative 1 With Project - PM Peak Hour

163: Pacific View & Beach

Synchro 6 Report























						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	
Frt	1.00	0.85	1.00	1.00	0.97	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	1583	1770	5085	4958	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1770	1583	1770	5085	4958	
Volume (vph)	200	50	140	1018	547	110
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	200	50	140	1018	547	110
RTOR Reduction (vph)	0	40	0	0	20	0
Lane Group Flow (vph)	200	10	140	1018	637	0
Turn Type		Perm	Prot			
Protected Phases	4		5	2	6	
Permitted Phases		4				
Actuated Green, G (s)	10.0	10.0	6.4	32.3	21.9	
Effective Green, g (s)	10.0	10.0	6.4	32.3	21.9	
Actuated g/C Ratio	0.20	0.20	0.13	0.64	0.44	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	352	315	225	3265	2159	
v/s Ratio Prot	c0.11		c0.08	c0.20	0.13	
v/s Ratio Perm		0.01				
v/c Ratio	0.57	0.03	0.62	0.31	0.29	
Uniform Delay, d1	18.2	16.2	20.8	4.0	9.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.1	0.0	5.3	0.1	0.1	
Delay (s)	20.3	16.3	26.1	4.1	9.3	
Level of Service	C	B	C	A	A	
Approach Delay (s)	19.5			6.7	9.3	
Approach LOS	B			A	A	
Intersection Summary						
HCM Average Control Delay			9.1	HCM Level of Service		A
HCM Volume to Capacity ratio			0.41			
Actuated Cycle Length (s)			50.3	Sum of lost time (s)		8.0
Intersection Capacity Utilization			41.9%	ICU Level of Service		A
Analysis Period (min)			15			
c Critical Lane Group						

**YEAR (2030) WITH PROJECT WITH
ALTERNATIVE 2 CONDITIONS
(HCM METHODOLOGY)**

2030 Alternative 2 With Project - AM Peak Hour

39: Pacific Coast Hwy & Warner












Synchro 6 Report

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00	1.00	1.00		0.97	1.00	0.88
Flt	1.00	1.00		1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	3526		1770	3539	1583	1770	1826		3433	1863	2787
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	3526		1770	3539	1583	1770	1826		3433	1863	2787
Volume (vph)	560	1509	40	30	1278	266	20	200	30	306	50	770
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	560	1509	40	30	1278	266	20	200	30	306	50	770
RTOR Reduction (vph)	0	1	0	0	0	83	0	4	0	0	0	425
Lane Group Flow (vph)	560	1548	0	30	1278	183	20	226	0	306	50	345
Turn Type	Prot			Prot		Perm	Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	20.9	63.1		3.3	45.5	45.5	1.5	19.8		12.4	30.7	30.7
Effective Green, g (s)	20.9	63.1		3.3	45.5	45.5	1.5	19.8		12.4	30.7	30.7
Actuated g/C Ratio	0.18	0.55		0.03	0.40	0.40	0.01	0.17		0.11	0.27	0.27
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	626	1941		51	1405	629	23	315		371	499	747
v/s Ratio Prot	c0.16	0.44		0.02	c0.36		0.01	c0.12		c0.09	0.03	
v/s Ratio Perm						0.12						0.12
v/c Ratio	0.89	0.80		0.59	0.91	0.29	0.87	0.72		0.82	0.10	0.46
Uniform Delay, d1	45.8	20.6		55.0	32.6	23.5	56.5	44.8		50.0	31.6	35.1
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	15.2	2.4		16.1	8.9	0.3	127.6	7.6		13.8	0.1	0.5
Delay (s)	61.0	23.0		71.1	41.5	23.8	184.0	52.3		63.9	31.6	35.5
Level of Service	E	C		E	D	C	F	D		E	C	D
Approach Delay (s)		33.1			39.1			62.9			43.0	
Approach LOS		C			D			E			D	
Intersection Summary												
HCM Average Control Delay			38.6			HCM Level of Service			D			
HCM Volume to Capacity ratio			0.86									
Actuated Cycle Length (s)			114.6			Sum of lost time (s)			16.0			
Intersection Capacity Utilization			85.7%			ICU Level of Service			E			
Analysis Period (min)			15									
c Critical Lane Group												

2030 Alternative 2 With Project - AM Peak Hour

125: Pacific Coast Hwy & Seapoint













Synchro 6 Report

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		0.97	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	3519		3433	1583
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	3539	3519		3433	1583
Volume (vph)	150	1515	1153	46	96	350
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	150	1515	1153	46	96	350
RTOR Reduction (vph)	0	0	3	0	0	30
Lane Group Flow (vph)	150	1515	1196	0	96	320
Turn Type	Prot				pm+ov	
Protected Phases	7	4	8		6	7
Permitted Phases						6
Actuated Green, G (s)	11.0	41.2	26.2		7.5	18.5
Effective Green, g (s)	11.0	41.2	26.2		7.5	18.5
Actuated g/C Ratio	0.19	0.73	0.46		0.13	0.33
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	343	2572	1626		454	628
v/s Ratio Prot	0.08	c0.43	c0.34		0.03	c0.10
v/s Ratio Perm						0.10
v/c Ratio	0.44	0.59	0.74		0.21	0.51
Uniform Delay, d1	20.1	3.7	12.4		22.0	15.4
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.9	0.3	1.8		0.2	0.7
Delay (s)	21.0	4.1	14.2		22.2	16.1
Level of Service	C	A	B		C	B
Approach Delay (s)		5.6	14.2		17.4	
Approach LOS		A	B		B	
Intersection Summary						
HCM Average Control Delay			10.3		HCM Level of Service	B
HCM Volume to Capacity ratio			0.70			
Actuated Cycle Length (s)			56.7		Sum of lost time (s)	12.0
Intersection Capacity Utilization			61.7%		ICU Level of Service	B
Analysis Period (min)			15			
c Critical Lane Group						

2030 Alternative 2 With Project - AM Peak Hour

126: Pacific Coast Hwy & Goldenwest













Synchro 6 Report

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3539	1583	1770	1583
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	3539	1583	1770	1583
Volume (vph)	190	1441	1178	189	329	290
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	190	1441	1178	189	329	290
RTOR Reduction (vph)	0	0	0	98	0	214
Lane Group Flow (vph)	190	1441	1178	91	329	76
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	10.9	49.3	34.4	34.4	20.4	20.4
Effective Green, g (s)	10.9	49.3	34.4	34.4	20.4	20.4
Actuated g/C Ratio	0.14	0.63	0.44	0.44	0.26	0.26
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	248	2245	1567	701	465	416
v/s Ratio Prot	c0.11	0.41	c0.33		c0.19	
v/s Ratio Perm				0.06		0.05
v/c Ratio	0.77	0.64	0.75	0.13	0.71	0.18
Uniform Delay, d1	32.2	8.8	18.1	12.8	25.9	22.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	13.2	0.6	2.1	0.1	4.9	0.2
Delay (s)	45.4	9.4	20.2	12.9	30.8	22.4
Level of Service	D	A	C	B	C	C
Approach Delay (s)		13.6	19.2		26.9	
Approach LOS		B	B		C	
Intersection Summary						
HCM Average Control Delay			18.0		HCM Level of Service	B
HCM Volume to Capacity ratio			0.74			
Actuated Cycle Length (s)			77.7		Sum of lost time (s)	12.0
Intersection Capacity Utilization			71.3%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						

2030 Alternative 2 With Project - AM Peak Hour

127: Pacific Coast Hwy & 17th St













Synchro 6 Report

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3539	1583	1770	1583
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	3539	1583	1770	1583
Volume (vph)	70	1631	1338	30	90	90
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	70	1631	1338	30	90	90
RTOR Reduction (vph)	0	0	0	14	0	75
Lane Group Flow (vph)	70	1631	1338	16	90	15
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	4.5	38.0	29.5	29.5	8.9	8.9
Effective Green, g (s)	4.5	38.0	29.5	29.5	8.9	8.9
Actuated g/C Ratio	0.08	0.69	0.54	0.54	0.16	0.16
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	145	2450	1902	851	287	257
v/s Ratio Prot	0.04	c0.46	0.38		c0.05	
v/s Ratio Perm				0.01		0.01
v/c Ratio	0.48	0.67	0.70	0.02	0.31	0.06
Uniform Delay, d1	24.1	4.8	9.4	5.9	20.3	19.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.5	0.7	1.2	0.0	0.6	0.1
Delay (s)	26.6	5.5	10.6	5.9	20.9	19.5
Level of Service	C	A	B	A	C	B
Approach Delay (s)		6.4	10.5		20.2	
Approach LOS		A	B		C	
Intersection Summary						
HCM Average Control Delay			8.9	HCM Level of Service		A
HCM Volume to Capacity ratio			0.60			
Actuated Cycle Length (s)			54.9	Sum of lost time (s)		8.0
Intersection Capacity Utilization			56.7%	ICU Level of Service		B
Analysis Period (min)			15			
c Critical Lane Group						

2030 Alternative 2 With Project - AM Peak Hour

165: Pacific Coast Hwy & 9th St




















Synchro 6 Report

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3539	1583	1770	1583
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	3539	1583	1770	1583
Volume (vph)	20	1661	1318	10	40	20
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	1661	1318	10	40	20
RTOR Reduction (vph)	0	0	0	4	0	17
Lane Group Flow (vph)	20	1661	1318	6	40	3
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	1.0	32.6	27.6	27.6	7.0	7.0
Effective Green, g (s)	1.0	32.6	27.6	27.6	7.0	7.0
Actuated g/C Ratio	0.02	0.68	0.58	0.58	0.15	0.15
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	37	2424	2052	918	260	233
v/s Ratio Prot	0.01	c0.47	0.37		c0.02	
v/s Ratio Perm				0.00		0.00
v/c Ratio	0.54	0.69	0.64	0.01	0.15	0.01
Uniform Delay, d1	23.1	4.5	6.7	4.2	17.7	17.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	15.1	0.8	0.7	0.0	0.3	0.0
Delay (s)	38.2	5.3	7.4	4.2	18.0	17.4
Level of Service	D	A	A	A	B	B
Approach Delay (s)		5.7	7.4		17.8	
Approach LOS		A	A		B	
Intersection Summary						
HCM Average Control Delay			6.6		HCM Level of Service	A
HCM Volume to Capacity ratio			0.59			
Actuated Cycle Length (s)			47.6		Sum of lost time (s)	8.0
Intersection Capacity Utilization			55.9%		ICU Level of Service	B
Analysis Period (min)			15			
c Critical Lane Group						

2030 Alternative 2 With Project - AM Peak Hour

129: Pacific Coast Hwy & 6th St















Synchro 6 Report

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00		1.00	1.00	
Frt	1.00	1.00		1.00	0.99			0.96		1.00	0.88	
Flt Protected	0.95	1.00		0.95	1.00			0.98		0.95	1.00	
Satd. Flow (prot)	1770	5076		1770	5059			1740		1770	1632	
Flt Permitted	0.95	1.00		0.95	1.00			0.46		0.66	1.00	
Satd. Flow (perm)	1770	5076		1770	5059			825		1223	1632	
Volume (vph)	118	1639	20	40	1167	41	40	20	30	50	30	142
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	118	1639	20	40	1167	41	40	20	30	50	30	142
RTOR Reduction (vph)	0	1	0	0	3	0	0	16	0	0	126	0
Lane Group Flow (vph)	118	1658	0	40	1205	0	0	74	0	50	46	0
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	9.6	40.2		4.1	34.7			11.3		11.3	11.3	
Effective Green, g (s)	9.6	40.2		4.1	34.7			11.3		11.3	11.3	
Actuated g/C Ratio	0.10	0.41		0.04	0.35			0.11		0.11	0.11	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	172	2065		73	1777			94		140	187	
v/s Ratio Prot	c0.07	c0.33		0.02	0.24						0.03	
v/s Ratio Perm								c0.09		0.04		
v/c Ratio	0.69	0.80		0.55	0.68			0.79		0.36	0.25	
Uniform Delay, d1	43.1	25.8		46.4	27.3			42.6		40.4	39.9	
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Incremental Delay, d2	10.8	2.4		8.2	1.0			34.2		1.6	0.7	
Delay (s)	53.9	28.2		54.6	28.3			76.7		42.0	40.6	
Level of Service	D	C		D	C			E		D	D	
Approach Delay (s)		29.9			29.2			76.7			40.9	
Approach LOS		C			C			E			D	
Intersection Summary												
HCM Average Control Delay			31.6			HCM Level of Service				C		
HCM Volume to Capacity ratio			0.76									
Actuated Cycle Length (s)			98.8			Sum of lost time (s)			39.2			
Intersection Capacity Utilization			64.2%			ICU Level of Service			C			
Analysis Period (min)			15									
c Critical Lane Group												

2030 Alternative 2 With Project - AM Peak Hour

130: Pacific Coast Hwy & Main























Synchro 6 Report

							
Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0			
Lane Util. Factor		0.91	1.00	0.91			
Frt		1.00	1.00	1.00			
Flt Protected		1.00	0.95	1.00			
Satd. Flow (prot)		5085	1770	5085			
Flt Permitted		1.00	0.95	1.00			
Satd. Flow (perm)		5085	1770	5085			
Volume (vph)	0	1640	10	1280	0	0	0
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1640	10	1280	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1640	10	1280	0	0	0
Turn Type	Prot		Prot		Perm		Perm
Protected Phases	7	4	3	8		6	
Permitted Phases					8		6
Actuated Green, G (s)		34.2	1.1	39.3			
Effective Green, g (s)		34.2	1.1	39.3			
Actuated g/C Ratio		0.41	0.01	0.47			
Clearance Time (s)		4.0	4.0	4.0			
Vehicle Extension (s)		3.0	3.0	3.0			
Lane Grp Cap (vph)		2083	23	2393			
v/s Ratio Prot		c0.32	0.01	c0.25			
v/s Ratio Perm							
v/c Ratio		0.79	0.43	0.53			
Uniform Delay, d1		21.5	40.9	15.6			
Progression Factor		1.00	1.00	1.00			
Incremental Delay, d2		2.0	12.6	0.2			
Delay (s)		23.5	53.5	15.9			
Level of Service		C	D	B			
Approach Delay (s)		23.5		16.2		0.0	
Approach LOS		C		B		A	
Intersection Summary							
HCM Average Control Delay			20.3		HCM Level of Service		C
HCM Volume to Capacity ratio			0.80				
Actuated Cycle Length (s)			83.5		Sum of lost time (s)		48.2
Intersection Capacity Utilization			35.0%		ICU Level of Service		A
Analysis Period (min)			15				
c Critical Lane Group							

2030 Alternative 2 With Project - AM Peak Hour

133: Pacific Coast Hwy & 1st St























Synchro 6 Report

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		0.95	0.95	1.00	0.95	0.95	0.88
Flt	1.00	0.99		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.99	1.00	0.95	0.97	1.00
Satd. Flow (prot)	1770	5050		1770	4890		1681	1753	1583	1681	1716	2787
Flt Permitted	0.95	1.00		0.95	1.00		0.95	0.99	1.00	0.95	0.97	1.00
Satd. Flow (perm)	1770	5050		1770	4890		1681	1753	1583	1681	1716	2787
Volume (vph)	170	1442	70	40	865	298	70	50	20	329	80	500
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	170	1442	70	40	865	298	70	50	20	329	80	500
RTOR Reduction (vph)	0	4	0	0	50	0	0	0	18	0	0	426
Lane Group Flow (vph)	170	1508	0	40	1113	0	58	62	2	199	210	74
Turn Type	Prot			Prot			Split		Perm	Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases									2			6
Actuated Green, G (s)	12.0	37.7		3.2	28.9		9.3	9.3	9.3	15.7	15.7	15.7
Effective Green, g (s)	12.0	37.7		3.2	28.9		9.3	9.3	9.3	15.7	15.7	15.7
Actuated g/C Ratio	0.11	0.34		0.03	0.26		0.08	0.08	0.08	0.14	0.14	0.14
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	190	1701		51	1263		140	146	132	236	241	391
v/s Ratio Prot	c0.10	c0.30		0.02	0.23		0.03	c0.04		0.12	c0.12	
v/s Ratio Perm									0.00			0.03
v/c Ratio	0.89	0.89		0.78	0.88		0.41	0.42	0.01	0.84	0.87	0.19
Uniform Delay, d1	49.3	35.1		54.0	39.9		48.7	48.8	47.1	46.9	47.1	42.5
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	37.2	6.0		53.8	7.5		2.0	2.0	0.0	23.0	27.2	0.2
Delay (s)	86.5	41.1		107.8	47.4		50.7	50.7	47.1	69.9	74.4	42.7
Level of Service	F	D		F	D		D	D	D	E	E	D
Approach Delay (s)		45.7			49.4			50.2			56.0	
Approach LOS		D			D			D			E	
Intersection Summary												
HCM Average Control Delay			49.3			HCM Level of Service			D			
HCM Volume to Capacity ratio			0.80									
Actuated Cycle Length (s)			111.9			Sum of lost time (s)			42.0			
Intersection Capacity Utilization			60.7%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

2030 Alternative 2 With Project - AM Peak Hour

134: Pacific Coast Hwy & Huntington
























Synchro 6 Report

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		0.95		0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.91		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583		3213		1681	1770	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.99		0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583		3213		1681	1770	1583
Volume (vph)	30	1619	10	60	1033	110	10	20	40	50	70	30
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	30	1619	10	60	1033	110	10	20	40	50	70	30
RTOR Reduction (vph)	0	0	4	0	0	43	0	37	0	0	0	27
Lane Group Flow (vph)	30	1619	6	60	1033	67	0	33	0	50	70	3
Turn Type	Prot		Perm	Prot		Perm	Split			Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4			8						6
Actuated Green, G (s)	1.9	45.6	45.6	5.1	48.8	48.8		6.9		9.0	9.0	9.0
Effective Green, g (s)	1.9	45.6	45.6	5.1	48.8	48.8		6.9		9.0	9.0	9.0
Actuated g/C Ratio	0.02	0.55	0.55	0.06	0.59	0.59		0.08		0.11	0.11	0.11
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	41	1954	874	109	2091	935		268		183	193	172
v/s Ratio Prot	0.02	c0.46		c0.03	c0.29			c0.01		0.03	c0.04	
v/s Ratio Perm			0.00			0.04						0.00
v/c Ratio	0.73	0.83	0.01	0.55	0.49	0.07		0.12		0.27	0.36	0.02
Uniform Delay, d1	40.1	15.3	8.3	37.6	9.8	7.2		35.1		33.8	34.1	32.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	49.4	3.0	0.0	5.9	0.2	0.0		0.2		0.8	1.2	0.0
Delay (s)	89.5	18.3	8.3	43.5	10.0	7.3		35.3		34.6	35.3	32.9
Level of Service	F	B	A	D	A	A		D		C	D	C
Approach Delay (s)		19.5			11.4			35.3			34.6	
Approach LOS		B			B			D			C	
Intersection Summary												
HCM Average Control Delay			17.4				HCM Level of Service			B		
HCM Volume to Capacity ratio			0.70									
Actuated Cycle Length (s)			82.6				Sum of lost time (s)			20.0		
Intersection Capacity Utilization			66.4%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												

2030 Alternative 2 With Project - AM Peak Hour

135: Pacific Coast Hwy & Beach





























Synchro 6 Report

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91		1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00
Flt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5072		1770	3539	1583	1770	3539	1583	3433	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5072		1770	3539	1583	1770	3539	1583	3433	1863	1583
Volume (vph)	131	1680	30	20	1112	300	20	50	10	500	80	192
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	131	1680	30	20	1112	300	20	50	10	500	80	192
RTOR Reduction (vph)	0	2	0	0	0	176	0	0	9	0	0	0
Lane Group Flow (vph)	131	1708	0	20	1112	124	20	50	1	500	80	192
Turn Type	Prot			Prot		Perm	Prot		Perm	Prot		Free
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			Free
Actuated Green, G (s)	6.4	39.0		2.2	34.8	34.8	2.2	10.4	10.4	16.9	25.1	84.5
Effective Green, g (s)	6.4	39.0		2.2	34.8	34.8	2.2	10.4	10.4	16.9	25.1	84.5
Actuated g/C Ratio	0.08	0.46		0.03	0.41	0.41	0.03	0.12	0.12	0.20	0.30	1.00
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	260	2341		46	1457	652	46	436	195	687	553	1583
v/s Ratio Prot	c0.04	c0.34		0.01	0.31		0.01	0.01		c0.15	c0.04	
v/s Ratio Perm						0.08			0.00			0.12
v/c Ratio	0.50	0.73		0.43	0.76	0.19	0.43	0.11	0.01	0.73	0.14	0.12
Uniform Delay, d1	37.5	18.5		40.5	21.3	15.9	40.5	33.0	32.5	31.6	21.8	0.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.5	1.2		6.5	2.4	0.1	6.5	0.1	0.0	3.9	0.1	0.2
Delay (s)	39.1	19.6		47.0	23.7	16.0	47.0	33.1	32.5	35.5	21.9	0.2
Level of Service	D	B		D	C	B	D	C	C	D	C	A
Approach Delay (s)		21.0			22.4			36.5			25.3	
Approach LOS		C			C			D			C	
Intersection Summary												
HCM Average Control Delay			22.6			HCM Level of Service			C			
HCM Volume to Capacity ratio			0.58									
Actuated Cycle Length (s)			84.5			Sum of lost time (s)			8.0			
Intersection Capacity Utilization			67.4%			ICU Level of Service			C			
Analysis Period (min)			15									
c Critical Lane Group												

2030 Alternative 2 With Project - AM Peak Hour

136: Pacific Coast Hwy & Newland

Synchro 6 Report

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			  			 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0			4.0	4.0
Lane Util. Factor	1.00	0.91			0.91	1.00		0.95			1.00	1.00
Frt	1.00	1.00			1.00	0.85		1.00			1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00		0.98			0.95	1.00
Satd. Flow (prot)	1770	5085			5085	1583		3453			1770	1583
Flt Permitted	0.95	1.00			1.00	1.00		0.85			0.74	1.00
Satd. Flow (perm)	1770	5085			5085	1583		3022			1385	1583
Volume (vph)	100	1860	0	0	1192	30	10	10	0	230	0	230
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	100	1860	0	0	1192	30	10	10	0	230	0	230
RTOR Reduction (vph)	0	0	0	0	0	17	0	0	0	0	0	128
Lane Group Flow (vph)	100	1860	0	0	1192	13	0	20	0	0	230	102
Turn Type	Prot		Perm	Prot		Perm	Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4			8	2			6		6
Actuated Green, G (s)	5.3	33.7			24.4	24.4		14.6			14.6	14.6
Effective Green, g (s)	5.3	33.7			24.4	24.4		14.6			14.6	14.6
Actuated g/C Ratio	0.09	0.60			0.43	0.43		0.26			0.26	0.26
Clearance Time (s)	4.0	4.0			4.0	4.0		4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0			3.0	3.0
Lane Grp Cap (vph)	167	3044			2204	686		784			359	411
v/s Ratio Prot	0.06	c0.37			0.23							
v/s Ratio Perm						0.01		0.01			c0.17	0.06
v/c Ratio	0.60	0.61			0.54	0.02		0.03			0.64	0.25
Uniform Delay, d1	24.5	7.2			11.8	9.1		15.5			18.5	16.5
Progression Factor	1.00	1.00			1.00	1.00		1.00			1.00	1.00
Incremental Delay, d2	5.7	0.4			0.3	0.0		0.0			3.9	0.3
Delay (s)	30.2	7.5			12.1	9.1		15.6			22.4	16.8
Level of Service	C	A			B	A		B			C	B
Approach Delay (s)		8.7			12.0			15.6			19.6	
Approach LOS		A			B			B			B	

























Intersection Summary

HCM Average Control Delay	11.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	56.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

2030 Alternative 2 With Project - AM Peak Hour

137: Pacific Coast Hwy & Magnolia

























Synchro 6 Report

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.95	0.95		0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1681	1681		1681	1703	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1681	1681		1681	1703	1583
Volume (vph)	100	1960	30	20	1082	50	10	20	10	160	20	170
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	100	1960	30	20	1082	50	10	20	10	160	20	170
RTOR Reduction (vph)	0	0	14	0	0	28	0	9	0	0	0	147
Lane Group Flow (vph)	100	1960	16	20	1082	22	10	21	0	88	92	23
Turn Type	Prot		Perm	Prot		Perm	Split			Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4			8						6
Actuated Green, G (s)	8.0	37.6	37.6	2.2	31.8	31.8	7.1	7.1		9.6	9.6	9.6
Effective Green, g (s)	8.0	37.6	37.6	2.2	31.8	31.8	7.1	7.1		9.6	9.6	9.6
Actuated g/C Ratio	0.11	0.52	0.52	0.03	0.44	0.44	0.10	0.10		0.13	0.13	0.13
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	195	2637	821	54	2230	694	165	165		223	226	210
v/s Ratio Prot	c0.06	c0.39		0.01	0.21		0.01	c0.01		0.05	c0.05	
v/s Ratio Perm			0.01			0.01						0.01
v/c Ratio	0.51	0.74	0.02	0.37	0.49	0.03	0.06	0.13		0.39	0.41	0.11
Uniform Delay, d1	30.4	13.7	8.5	34.5	14.5	11.6	29.7	29.9		28.8	28.8	27.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.3	1.2	0.0	4.2	0.2	0.0	0.2	0.3		1.2	1.2	0.2
Delay (s)	32.7	14.8	8.5	38.7	14.7	11.6	29.8	30.2		29.9	30.0	27.9
Level of Service	C	B	A	D	B	B	C	C		C	C	C
Approach Delay (s)		15.6			15.0			30.1			29.0	
Approach LOS		B			B			C			C	
Intersection Summary												
HCM Average Control Delay			16.8			HCM Level of Service			B			
HCM Volume to Capacity ratio			0.61									
Actuated Cycle Length (s)			72.5			Sum of lost time (s)			16.0			
Intersection Capacity Utilization			62.8%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

2030 Alternative 2 With Project - AM Peak Hour

138: Pacific Coast Hwy & Brookhurst

Synchro 6 Report

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1723		3433	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1723		3433	1863	1583
Volume (vph)	170	2020	10	10	972	210	10	10	10	670	10	160
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	170	2020	10	10	972	210	10	10	10	670	10	160
RTOR Reduction (vph)	0	0	5	0	0	80	0	9	0	0	0	120
Lane Group Flow (vph)	170	2020	5	10	972	130	10	11	0	670	10	40
Turn Type	Prot		Perm	Prot		pm+ov	Split			Split		Perm
Protected Phases	7	4		3	8	6	2	2		6	6	
Permitted Phases			4			8						6
Actuated Green, G (s)	11.0	42.6	42.6	0.6	32.2	54.2	6.6	6.6		22.0	22.0	22.0
Effective Green, g (s)	11.0	42.6	42.6	0.6	32.2	54.2	6.6	6.6		22.0	22.0	22.0
Actuated g/C Ratio	0.13	0.49	0.49	0.01	0.37	0.62	0.08	0.08		0.25	0.25	0.25
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	222	2467	768	12	1865	977	133	130		860	467	397
v/s Ratio Prot	c0.10	c0.40		0.01	0.19	0.03	0.01	c0.01		c0.20	0.01	
v/s Ratio Perm			0.00			0.05						0.03
v/c Ratio	0.77	0.82	0.01	0.83	0.52	0.13	0.08	0.08		0.78	0.02	0.10
Uniform Delay, d1	37.2	19.3	11.7	43.6	21.8	7.0	37.8	37.8		30.6	24.8	25.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	14.5	2.2	0.0	168.3	0.3	0.1	0.2	0.3		4.5	0.0	0.1
Delay (s)	51.7	21.5	11.7	211.9	22.0	7.1	38.0	38.1		35.1	24.8	25.4
Level of Service	D	C	B	F	C	A	D	D		D	C	C
Approach Delay (s)		23.8			21.0			38.0			33.2	
Approach LOS		C			C			D			C	

Intersection Summary

HCM Average Control Delay	25.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	87.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	78.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

ALL-WAY STOP CONTROL ANALYSIS**General Information**

Analyst	SA
Agency/Co.	
Date Performed	3/31/2009
Analysis Time Period	AM Peak

Site Information

Intersection	Lake Street/6th Street
Jurisdiction	
Analysis Year	2030 Base Case+Project+Alt 2

Project ID

East/West Street: 6th Street

North/South Street: Lake Street

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	78	30	73	0	90	30
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	22	47	0	60	118	70
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LTR		LTR	
PHF	1.00		1.00		1.00		1.00	
Flow Rate (veh/h)	181		120		69		248	
% Heavy Vehicles	0		0		0		0	
No. Lanes	1		1		1		1	
Geometry Group	1		1		1		1	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.4		0.0		0.3		0.2	
Prop. Right-Turns	0.4		0.3		0.0		0.3	
Prop. Heavy Vehicle	0.0		0.0		0.0		0.0	
hLT-adj	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
hRT-adj	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	-0.2		-0.2		0.1		-0.1	

Departure Headway and Service Time

hd, initial value (s)	3.20		3.20		3.20		3.20	
x, initial	0.16		0.11		0.06		0.22	
hd, final value (s)	4.69		4.78		5.04		4.62	
x, final value	0.24		0.16		0.10		0.32	
Move-up time, m (s)	2.0		2.0		2.0		2.0	
Service Time, t _s (s)	2.7		2.8		3.0		2.6	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	431		370		319		498	
Delay (s/veh)	9.13		8.68		8.57		9.76	
LOS	A		A		A		A	
Approach: Delay (s/veh)	9.13		8.68		8.57		9.76	
LOS	A		A		A		A	
Intersection Delay (s/veh)	9.23							
Intersection LOS	A							

ALL-WAY STOP CONTROL ANALYSIS

General Information				Site Information	
Analyst	SA			Intersection	Lake Street/Orange Avenue
Agency/Co.				Jurisdiction	
Date Performed	3/31/2009			Analysis Year	2030 Base Case+Project+Alt 2
Analysis Time Period	AM Peak				

Project ID

East/West Street: Orange Avenue

North/South Street: Lake Street

Volume Adjustments and Site Characteristics

Approach		Eastbound			Westbound		
Movement		L	T	R	L	T	R
Volume (veh/h)		30	319	41	52	278	42
%Thrus Left Lane							
Approach		Northbound			Southbound		
Movement		L	T	R	L	T	R
Volume (veh/h)		60	58	18	21	150	20
%Thrus Left Lane							

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LTR		LTR	
PHF	1.00		1.00		1.00		1.00	
Flow Rate (veh/h)	390		372		136		191	
% Heavy Vehicles	0		0		0		0	
No. Lanes	1		1		1		1	
Geometry Group	1		1		1		1	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.1		0.1		0.4		0.1	
Prop. Right-Turns	0.1		0.1		0.1		0.1	
Prop. Heavy Vehicle	0.0		0.0		0.0		0.0	
hLT-adj	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
hRT-adj	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	-0.0		-0.0		0.0		-0.0	

Departure Headway and Service Time

hd, initial value (s)	3.20		3.20		3.20		3.20	
x, initial	0.35		0.33		0.12		0.17	
hd, final value (s)	5.61		5.65		6.56		6.36	
x, final value	0.61		0.58		0.25		0.34	
Move-up time, m (s)	2.0		2.0		2.0		2.0	
Service Time, t _s (s)	3.6		3.6		4.6		4.4	
























Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	613		606		386		441	
Delay (s/veh)	16.93		16.26		11.71		12.56	
LOS	C		C		B		B	
Approach: Delay (s/veh)	16.93		16.26		11.71		12.56	
LOS	C		C		B		B	
Intersection Delay (s/veh)	15.28							
Intersection LOS	C							

2030 Alternative 2 With Project - AM Peak Hour












108: Atlanta & Beach

Synchro 6 Report

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	4973		1770	4890	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	1770	4973		1770	4890	
Volume (vph)	112	303	50	65	495	180	20	436	75	190	647	223
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	112	303	50	65	495	180	20	436	75	190	647	223
RTOR Reduction (vph)	0	0	35	0	0	135	0	19	0	0	48	0
Lane Group Flow (vph)	112	303	15	65	495	45	20	492	0	190	822	0
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	7.5	19.2	19.2	4.6	16.3	16.3	1.1	15.7		9.7	24.3	
Effective Green, g (s)	7.5	19.2	19.2	4.6	16.3	16.3	1.1	15.7		9.7	24.3	
Actuated g/C Ratio	0.12	0.29	0.29	0.07	0.25	0.25	0.02	0.24		0.15	0.37	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	204	1042	466	125	885	396	30	1197		263	1823	
v/s Ratio Prot	c0.06	c0.09		0.04	c0.14		0.01	0.10		c0.11	c0.17	
v/s Ratio Perm			0.01			0.03						
v/c Ratio	0.55	0.29	0.03	0.52	0.56	0.11	0.67	0.41		0.72	0.45	
Uniform Delay, d1	27.3	17.7	16.4	29.2	21.3	18.9	31.9	20.9		26.5	15.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.0	0.2	0.0	3.9	0.8	0.1	44.1	0.2		9.4	0.2	
Delay (s)	30.3	17.9	16.4	33.1	22.1	19.0	76.0	21.1		35.9	15.6	
Level of Service	C	B	B	C	C	B	E	C		D	B	
Approach Delay (s)		20.7			22.3			23.2			19.2	
Approach LOS		C			C			C			B	
Intersection Summary												
HCM Average Control Delay			21.0			HCM Level of Service				C		
HCM Volume to Capacity ratio			0.56									
Actuated Cycle Length (s)			65.2			Sum of lost time (s)			16.0			
Intersection Capacity Utilization			54.0%			ICU Level of Service			A			
Analysis Period (min)			15									
c Critical Lane Group												

2030 Alternative 2 With Project - AM Peak Hour
163: Pacific View & Beach























Synchro 6 Report

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	
Frt	1.00	0.85	1.00	1.00	0.97	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	1583	1770	5085	4955	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1770	1583	1770	5085	4955	
Volume (vph)	50	42	70	399	729	150
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	50	42	70	399	729	150
RTOR Reduction (vph)	0	38	0	0	16	0
Lane Group Flow (vph)	50	4	70	399	863	0
Turn Type		Perm	Prot			
Protected Phases	4		5	2	6	
Permitted Phases		4				
Actuated Green, G (s)	6.4	6.4	4.5	45.5	37.0	
Effective Green, g (s)	6.4	6.4	4.5	45.5	37.0	
Actuated g/C Ratio	0.11	0.11	0.08	0.76	0.62	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	189	169	133	3863	3061	
v/s Ratio Prot	c0.03		c0.04	0.08	c0.17	
v/s Ratio Perm		0.00				
v/c Ratio	0.26	0.03	0.53	0.10	0.28	
Uniform Delay, d1	24.6	24.0	26.7	1.9	5.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.8	0.1	3.7	0.0	0.1	
Delay (s)	25.3	24.0	30.4	1.9	5.4	
Level of Service	C	C	C	A	A	
Approach Delay (s)	24.7			6.1	5.4	
Approach LOS	C			A	A	
Intersection Summary						
HCM Average Control Delay			6.8	HCM Level of Service		A
HCM Volume to Capacity ratio			0.30			
Actuated Cycle Length (s)			59.9	Sum of lost time (s)		12.0
Intersection Capacity Utilization			34.6%	ICU Level of Service		A
Analysis Period (min)			15			
c Critical Lane Group						

2030 Alternative 2 With Project - PM Peak Hour

39: Pacific Coast Hwy & Warner












Synchro 6 Report

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00	1.00	1.00		0.97	1.00	0.88
Flt	1.00	1.00		1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	3527		1770	3539	1583	1770	1788		3433	1863	2787
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	3527		1770	3539	1583	1770	1788		3433	1863	2787
Volume (vph)	410	1284	30	20	1616	339	30	110	40	359	70	830
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	410	1284	30	20	1616	339	30	110	40	359	70	830
RTOR Reduction (vph)	0	1	0	0	0	81	0	11	0	0	0	262
Lane Group Flow (vph)	410	1313	0	20	1616	258	30	139	0	359	70	568
Turn Type	Prot			Prot		Perm	Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	15.1	70.5		1.9	57.3	57.3	2.3	16.3		14.4	28.4	28.4
Effective Green, g (s)	15.1	70.5		1.9	57.3	57.3	2.3	16.3		14.4	28.4	28.4
Actuated g/C Ratio	0.13	0.59		0.02	0.48	0.48	0.02	0.14		0.12	0.24	0.24
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	435	2088		28	1703	762	34	245		415	444	665
v/s Ratio Prot	c0.12	0.37		0.01	c0.46		0.02	0.08		c0.10	0.04	
v/s Ratio Perm						0.16						c0.20
v/c Ratio	0.94	0.63		0.71	0.95	0.34	0.88	0.57		0.87	0.16	0.85
Uniform Delay, d1	51.6	15.8		58.3	29.5	19.1	58.3	48.1		51.4	35.9	43.4
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	28.9	0.6		60.5	11.7	0.3	106.5	3.0		16.9	0.2	10.4
Delay (s)	80.5	16.4		118.9	41.2	19.4	164.8	51.1		68.3	36.1	53.8
Level of Service	F	B		F	D	B	F	D		E	D	D
Approach Delay (s)		31.6			38.3			70.0			56.9	
Approach LOS		C			D			E			E	
Intersection Summary												
HCM Average Control Delay			41.7			HCM Level of Service				D		
HCM Volume to Capacity ratio			0.91									
Actuated Cycle Length (s)			119.1			Sum of lost time (s)				12.0		
Intersection Capacity Utilization			88.2%			ICU Level of Service				E		
Analysis Period (min)			15									
c Critical Lane Group												

2030 Alternative 2 With Project - PM Peak Hour

125: Pacific Coast Hwy & Seapoint













Synchro 6 Report

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		0.97	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	3510		3433	1583
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	3539	3510		3433	1583
Volume (vph)	340	1433	1555	89	59	410
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	340	1433	1555	89	59	410
RTOR Reduction (vph)	0	0	3	0	0	12
Lane Group Flow (vph)	340	1433	1641	0	59	398
Turn Type	Prot				pm+ov	
Protected Phases	7	4	8		6	7
Permitted Phases						6
Actuated Green, G (s)	21.8	74.8	49.0		7.4	29.2
Effective Green, g (s)	21.8	74.8	49.0		7.4	29.2
Actuated g/C Ratio	0.24	0.83	0.54		0.08	0.32
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	428	2935	1907		282	583
v/s Ratio Prot	c0.19	0.40	c0.47		0.02	c0.16
v/s Ratio Perm						0.09
v/c Ratio	0.79	0.49	0.86		0.21	0.68
Uniform Delay, d1	32.1	2.2	17.7		38.7	26.5
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	9.8	0.1	4.2		0.4	3.3
Delay (s)	41.9	2.3	21.9		39.0	29.8
Level of Service	D	A	C		D	C
Approach Delay (s)		9.9	21.9		30.9	
Approach LOS		A	C		C	
Intersection Summary						
HCM Average Control Delay			17.5		HCM Level of Service	B
HCM Volume to Capacity ratio			0.84			
Actuated Cycle Length (s)			90.2		Sum of lost time (s)	12.0
Intersection Capacity Utilization			78.0%		ICU Level of Service	D
Analysis Period (min)			15			
c Critical Lane Group						

2030 Alternative 2 With Project - PM Peak Hour

126: Pacific Coast Hwy & Goldenwest













Synchro 6 Report

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3539	1583	1770	1583
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	3539	1583	1770	1583
Volume (vph)	550	1472	1504	273	252	480
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	550	1472	1504	273	252	480
RTOR Reduction (vph)	0	0	0	114	0	396
Lane Group Flow (vph)	550	1472	1504	159	252	84
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	38.0	94.0	52.0	52.0	18.0	18.0
Effective Green, g (s)	38.0	94.0	52.0	52.0	18.0	18.0
Actuated g/C Ratio	0.32	0.78	0.43	0.43	0.15	0.15
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	561	2772	1534	686	266	237
v/s Ratio Prot	c0.31	0.42	c0.42		c0.14	
v/s Ratio Perm				0.10		0.05
v/c Ratio	0.98	0.53	0.98	0.23	0.95	0.35
Uniform Delay, d1	40.6	4.8	33.5	21.4	50.5	45.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	32.9	0.2	18.4	0.2	40.6	0.9
Delay (s)	73.5	5.0	51.9	21.6	91.1	46.7
Level of Service	E	A	D	C	F	D
Approach Delay (s)		23.6	47.3		62.0	
Approach LOS		C	D		E	
Intersection Summary						
HCM Average Control Delay			39.1		HCM Level of Service	D
HCM Volume to Capacity ratio			0.98			
Actuated Cycle Length (s)			120.0		Sum of lost time (s)	12.0
Intersection Capacity Utilization			96.0%		ICU Level of Service	F
Analysis Period (min)			15			
c Critical Lane Group						

2030 Alternative 2 With Project - PM Peak Hour

127: Pacific Coast Hwy & 17th St













Synchro 6 Report

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3539	1583	1770	1583
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	3539	1583	1770	1583
Volume (vph)	340	1403	1736	60	110	100
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	340	1403	1736	60	110	100
RTOR Reduction (vph)	0	0	0	21	0	89
Lane Group Flow (vph)	340	1403	1736	39	110	11
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	22.9	81.8	54.9	54.9	11.4	11.4
Effective Green, g (s)	22.9	81.8	54.9	54.9	11.4	11.4
Actuated g/C Ratio	0.23	0.81	0.54	0.54	0.11	0.11
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	401	2861	1920	859	199	178
v/s Ratio Prot	c0.19	0.40	c0.49		c0.06	
v/s Ratio Perm				0.02		0.01
v/c Ratio	0.85	0.49	0.90	0.05	0.55	0.06
Uniform Delay, d1	37.5	3.1	20.8	10.9	42.5	40.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	15.2	0.1	6.5	0.0	3.3	0.2
Delay (s)	52.7	3.2	27.2	10.9	45.8	40.3
Level of Service	D	A	C	B	D	D
Approach Delay (s)		12.9	26.7		43.2	
Approach LOS		B	C		D	
Intersection Summary						
HCM Average Control Delay			21.2		HCM Level of Service	C
HCM Volume to Capacity ratio			0.84			
Actuated Cycle Length (s)			101.2		Sum of lost time (s)	12.0
Intersection Capacity Utilization			82.9%		ICU Level of Service	E
Analysis Period (min)			15			
c Critical Lane Group						

2030 Alternative 2 With Project - PM Peak Hour

165: Pacific Coast Hwy & 9th St




















Synchro 6 Report

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3539	1583	1770	1583
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	3539	1583	1770	1583
Volume (vph)	20	1521	1838	30	50	20
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	1521	1838	30	50	20
RTOR Reduction (vph)	0	0	0	11	0	17
Lane Group Flow (vph)	20	1521	1838	19	50	3
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	2.0	46.0	40.0	40.0	8.3	8.3
Effective Green, g (s)	2.0	46.0	40.0	40.0	8.3	8.3
Actuated g/C Ratio	0.03	0.74	0.64	0.64	0.13	0.13
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	57	2613	2272	1016	236	211
v/s Ratio Prot	0.01	c0.43	c0.52		c0.03	
v/s Ratio Perm				0.01		0.00
v/c Ratio	0.35	0.58	0.81	0.02	0.21	0.01
Uniform Delay, d1	29.5	3.7	8.3	4.0	24.1	23.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.7	0.3	2.2	0.0	0.5	0.0
Delay (s)	33.2	4.1	10.5	4.0	24.5	23.5
Level of Service	C	A	B	A	C	C
Approach Delay (s)		4.5	10.4		24.2	
Approach LOS		A	B		C	
Intersection Summary						
HCM Average Control Delay			8.1		HCM Level of Service	A
HCM Volume to Capacity ratio			0.72			
Actuated Cycle Length (s)			62.3		Sum of lost time (s)	12.0
Intersection Capacity Utilization			60.8%		ICU Level of Service	B
Analysis Period (min)			15			
c Critical Lane Group						

2030 Alternative 2 With Project - PM Peak Hour

129: Pacific Coast Hwy & 6th St















Synchro 6 Report

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00		1.00	1.00	
Flt	1.00	1.00		1.00	0.99			0.93		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00			0.98		0.95	1.00	
Satd. Flow (prot)	1770	5068		1770	5035			1701		1770	1621	
Flt Permitted	0.95	1.00		0.95	1.00			0.40		0.51	1.00	
Satd. Flow (perm)	1770	5068		1770	5035			683		954	1621	
Volume (vph)	326	1330	30	40	1661	117	40	20	70	107	30	191
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	326	1330	30	40	1661	117	40	20	70	107	30	191
RTOR Reduction (vph)	0	2	0	0	7	0	0	35	0	0	165	0
Lane Group Flow (vph)	326	1358	0	40	1771	0	0	95	0	107	56	0
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	21.0	56.3		5.5	40.8			16.2		16.2	16.2	
Effective Green, g (s)	21.0	56.3		5.5	40.8			16.2		16.2	16.2	
Actuated g/C Ratio	0.18	0.47		0.05	0.34			0.13		0.13	0.13	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	310	2378		81	1712			92		129	219	
v/s Ratio Prot	c0.18	0.27		0.02	c0.35						0.03	
v/s Ratio Perm								c0.14		0.11		
v/c Ratio	1.05	0.57		0.49	1.03			1.03		0.83	0.25	
Uniform Delay, d1	49.5	23.1		55.9	39.6			51.9		50.6	46.5	
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Incremental Delay, d2	65.3	0.3		4.7	31.3			101.5		33.6	0.6	
Delay (s)	114.8	23.4		60.6	70.9			153.4		84.2	47.1	
Level of Service	F	C		E	E			F		F	D	
Approach Delay (s)		41.1			70.6			153.4			59.2	
Approach LOS		D			E			F			E	
Intersection Summary												
HCM Average Control Delay			59.8			HCM Level of Service				E		
HCM Volume to Capacity ratio			1.04									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)			42.0			
Intersection Capacity Utilization			87.0%			ICU Level of Service			E			
Analysis Period (min)			15									
c Critical Lane Group												

2030 Alternative 2 With Project - PM Peak Hour

130: Pacific Coast Hwy & Main























Synchro 6 Report

							
Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0			
Lane Util. Factor		0.91	1.00	0.91			
Frt		1.00	1.00	1.00			
Flt Protected		1.00	0.95	1.00			
Satd. Flow (prot)		5085	1770	5085			
Flt Permitted		1.00	0.95	1.00			
Satd. Flow (perm)		5085	1770	5085			
Volume (vph)	0	1283	40	1623	0	0	0
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1283	40	1623	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1283	40	1623	0	0	0
Turn Type	Prot		Prot		Perm		Perm
Protected Phases	7	4	3	8		6	
Permitted Phases					8		6
Actuated Green, G (s)		29.8	4.7	38.5			
Effective Green, g (s)		29.8	4.7	38.5			
Actuated g/C Ratio		0.36	0.06	0.47			
Clearance Time (s)		4.0	4.0	4.0			
Vehicle Extension (s)		3.0	3.0	3.0			
Lane Grp Cap (vph)		1837	101	2373			
v/s Ratio Prot		0.25	0.02	c0.32			
v/s Ratio Perm							
v/c Ratio		0.70	0.40	0.68			
Uniform Delay, d1		22.5	37.5	17.2			
Progression Factor		1.00	1.00	1.00			
Incremental Delay, d2		1.2	2.5	0.8			
Delay (s)		23.7	40.1	18.1			
Level of Service		C	D	B			
Approach Delay (s)		23.7		18.6		0.0	
Approach LOS		C		B		A	
Intersection Summary							
HCM Average Control Delay			20.8		HCM Level of Service		C
HCM Volume to Capacity ratio			0.68				
Actuated Cycle Length (s)			82.5		Sum of lost time (s)		44.0
Intersection Capacity Utilization			36.6%		ICU Level of Service		A
Analysis Period (min)			15				
c Critical Lane Group							

2030 Alternative 2 With Project - PM Peak Hour

133: Pacific Coast Hwy & 1st St
























Synchro 6 Report

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		0.95	0.95	1.00	0.95	0.95	0.88
Flt	1.00	1.00		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.99	1.00	0.95	0.96	1.00
Satd. Flow (prot)	1770	5072		1770	4916		1681	1745	1583	1681	1695	2787
Flt Permitted	0.95	1.00		0.95	1.00		0.95	0.99	1.00	0.95	0.96	1.00
Satd. Flow (perm)	1770	5072		1770	4916		1681	1745	1583	1681	1695	2787
Volume (vph)	376	1102	20	60	1608	458	70	40	70	471	30	277
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	376	1102	20	60	1608	458	70	40	70	471	30	277
RTOR Reduction (vph)	0	1	0	0	42	0	0	0	64	0	0	192
Lane Group Flow (vph)	376	1121	0	60	2024	0	54	56	6	244	257	85
Turn Type	Prot			Prot			Split		Perm	Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases									2			6
Actuated Green, G (s)	12.0	36.1		4.8	28.9		8.9	8.9	8.9	16.0	16.0	16.0
Effective Green, g (s)	12.0	36.1		4.8	28.9		8.9	8.9	8.9	16.0	16.0	16.0
Actuated g/C Ratio	0.11	0.32		0.04	0.26		0.08	0.08	0.08	0.14	0.14	0.14
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	190	1638		76	1271		134	139	126	241	243	399
v/s Ratio Prot	c0.21	0.22		0.03	c0.41		c0.03	0.03		0.15	c0.15	
v/s Ratio Perm									0.00			0.03
v/c Ratio	1.98	0.68		0.79	1.59		0.40	0.40	0.04	1.01	1.06	0.21
Uniform Delay, d1	49.9	32.9		53.0	41.4		48.9	48.9	47.5	47.9	47.9	42.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	458.9	1.2		40.6	270.5		2.0	1.9	0.1	61.2	73.7	0.3
Delay (s)	508.8	34.1		93.6	312.0		50.9	50.8	47.7	109.1	121.6	42.6
Level of Service	F	C		F	F		D	D	D	F	F	D
Approach Delay (s)		153.2			305.8			49.6			89.6	
Approach LOS		F			F			D			F	
Intersection Summary												
HCM Average Control Delay			209.2			HCM Level of Service			F			
HCM Volume to Capacity ratio			1.37									
Actuated Cycle Length (s)			111.8			Sum of lost time (s)			46.0			
Intersection Capacity Utilization			92.6%			ICU Level of Service			F			
Analysis Period (min)			15									
c Critical Lane Group												

2030 Alternative 2 With Project - PM Peak Hour

134: Pacific Coast Hwy & Huntington
























Synchro 6 Report

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		0.95		0.95	0.95	1.00
Flt	1.00	1.00	0.85	1.00	1.00	0.85		0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583		3253		1681	1770	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.99		0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583		3253		1681	1770	1583
Volume (vph)	60	1339	10	40	1833	80	40	60	90	30	40	50
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	60	1339	10	40	1833	80	40	60	90	30	40	50
RTOR Reduction (vph)	0	0	4	0	0	17	0	82	0	0	0	46
Lane Group Flow (vph)	60	1339	6	40	1833	63	0	108	0	30	40	4
Turn Type	Prot		Perm	Prot		Perm	Split			Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4			8						6
Actuated Green, G (s)	3.7	55.2	55.2	3.6	55.1	55.1		8.6		7.9	7.9	7.9
Effective Green, g (s)	3.7	55.2	55.2	3.6	55.1	55.1		8.6		7.9	7.9	7.9
Actuated g/C Ratio	0.04	0.60	0.60	0.04	0.60	0.60		0.09		0.09	0.09	0.09
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	72	2140	957	70	2136	955		306		145	153	137
v/s Ratio Prot	c0.03	0.38		0.02	c0.52			c0.03		0.02	c0.02	
v/s Ratio Perm			0.00			0.04						0.00
v/c Ratio	0.83	0.63	0.01	0.57	0.86	0.07		0.35		0.21	0.26	0.03
Uniform Delay, d1	43.5	11.5	7.2	43.1	14.9	7.5		38.7		38.8	39.0	38.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	53.2	0.6	0.0	10.8	3.7	0.0		0.7		0.7	0.9	0.1
Delay (s)	96.7	12.1	7.2	53.9	18.5	7.5		39.5		39.5	39.9	38.3
Level of Service	F	B	A	D	B	A		D		D	D	D
Approach Delay (s)		15.6			18.8			39.5			39.1	
Approach LOS		B			B			D			D	
Intersection Summary												
HCM Average Control Delay			19.3			HCM Level of Service				B		
HCM Volume to Capacity ratio			0.74									
Actuated Cycle Length (s)			91.3			Sum of lost time (s)			16.0			
Intersection Capacity Utilization			69.7%			ICU Level of Service			C			
Analysis Period (min)			15									
c Critical Lane Group												

2030 Alternative 2 With Project - PM Peak Hour

135: Pacific Coast Hwy & Beach





























Synchro 6 Report

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91		1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00
Flt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5068		1770	3539	1583	1770	3539	1583	3433	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5068		1770	3539	1583	1770	3539	1583	3433	1863	1583
Volume (vph)	235	1303	30	40	1609	850	20	50	30	340	50	144
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	235	1303	30	40	1609	850	20	50	30	340	50	144
RTOR Reduction (vph)	0	2	0	0	0	318	0	0	27	0	0	0
Lane Group Flow (vph)	235	1331	0	40	1609	532	20	50	3	340	50	144
Turn Type	Prot			Prot		Perm	Prot		Perm	Prot		Free
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			Free
Actuated Green, G (s)	10.4	63.4		3.9	56.9	56.9	1.9	9.6	9.6	13.2	20.9	106.1
Effective Green, g (s)	10.4	63.4		3.9	56.9	56.9	1.9	9.6	9.6	13.2	20.9	106.1
Actuated g/C Ratio	0.10	0.60		0.04	0.54	0.54	0.02	0.09	0.09	0.12	0.20	1.00
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	337	3028		65	1898	849	32	320	143	427	367	1583
v/s Ratio Prot	c0.07	0.26		0.02	c0.45		0.01	0.01		c0.10	c0.03	
v/s Ratio Perm						0.34			0.00			0.09
v/c Ratio	0.70	0.44		0.62	0.85	0.63	0.62	0.16	0.02	0.80	0.14	0.09
Uniform Delay, d1	46.3	11.7		50.4	20.9	17.2	51.7	44.5	44.0	45.1	35.2	0.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.2	0.1		16.1	3.7	1.5	32.4	0.2	0.1	9.9	0.2	0.1
Delay (s)	52.5	11.8		66.4	24.6	18.6	84.1	44.7	44.0	55.0	35.3	0.1
Level of Service	D	B		E	C	B	F	D	D	E	D	A
Approach Delay (s)		17.9			23.3			52.4			38.4	
Approach LOS		B			C			D			D	
Intersection Summary												
HCM Average Control Delay			23.8			HCM Level of Service				C		
HCM Volume to Capacity ratio			0.72									
Actuated Cycle Length (s)			106.1			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			77.5%			ICU Level of Service			D			
Analysis Period (min)			15									
c Critical Lane Group												

2030 Alternative 2 With Project - PM Peak Hour

136: Pacific Coast Hwy & Newland

Synchro 6 Report

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			  			 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0		4.0			4.0	4.0
Lane Util. Factor	1.00	0.91	1.00		0.91	1.00		0.95			1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.85		1.00			1.00	0.85
Flt Protected	0.95	1.00	1.00		1.00	1.00		1.00			0.95	1.00
Satd. Flow (prot)	1770	5085	1583		5085	1583		3539			1770	1583
Flt Permitted	0.95	1.00	1.00		1.00	1.00		1.00			0.75	1.00
Satd. Flow (perm)	1770	5085	1583		5085	1583		3539			1398	1583
Volume (vph)	200	1424	10	0	2309	320	0	10	0	110	0	210
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	200	1424	10	0	2309	320	0	10	0	110	0	210
RTOR Reduction (vph)	0	0	2	0	0	135	0	0	0	0	0	182
Lane Group Flow (vph)	200	1424	8	0	2309	185	0	10	0	0	110	28
Turn Type	Prot		Perm	Prot		Perm	Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4			8	2			6		6
Actuated Green, G (s)	15.6	74.4	74.4		54.8	54.8		12.6			12.6	12.6
Effective Green, g (s)	15.6	74.4	74.4		54.8	54.8		12.6			12.6	12.6
Actuated g/C Ratio	0.16	0.78	0.78		0.58	0.58		0.13			0.13	0.13
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0		4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		3.0			3.0	3.0
Lane Grp Cap (vph)	291	3982	1240		2933	913		469			185	210
v/s Ratio Prot	c0.11	0.28			c0.45			0.00				
v/s Ratio Perm			0.00			0.12					c0.08	0.02
v/c Ratio	0.69	0.36	0.01		0.79	0.20		0.02			0.59	0.13
Uniform Delay, d1	37.4	3.1	2.2		15.6	9.6		35.8			38.8	36.4
Progression Factor	1.00	1.00	1.00		1.00	1.00		1.00			1.00	1.00
Incremental Delay, d2	6.6	0.1	0.0		1.5	0.1		0.0			5.1	0.3
Delay (s)	44.0	3.2	2.2		17.0	9.7		35.9			43.8	36.7
Level of Service	D	A	A		B	A		D			D	D
Approach Delay (s)		8.2			16.2			35.9			39.1	
Approach LOS		A			B			D			D	






























Intersection Summary

HCM Average Control Delay	14.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	78.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

2030 Alternative 2 With Project - PM Peak Hour

137: Pacific Coast Hwy & Magnolia
































Synchro 6 Report

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.95	0.95		0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1681	1703		1681	1719	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1681	1703		1681	1719	1583
Volume (vph)	150	1303	30	30	2659	200	20	30	10	110	30	100
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	150	1303	30	30	2659	200	20	30	10	110	30	100
RTOR Reduction (vph)	0	0	10	0	0	72	0	9	0	0	0	91
Lane Group Flow (vph)	150	1303	20	30	2659	128	20	31	0	68	72	9
Turn Type	Prot		Perm	Prot		Perm	Split			Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4			8						6
Actuated Green, G (s)	10.0	69.3	69.3	3.5	62.8	62.8	7.4	7.4		9.7	9.7	9.7
Effective Green, g (s)	10.0	69.3	69.3	3.5	62.8	62.8	7.4	7.4		9.7	9.7	9.7
Actuated g/C Ratio	0.09	0.65	0.65	0.03	0.59	0.59	0.07	0.07		0.09	0.09	0.09
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	167	3328	1036	58	3015	939	117	119		154	157	145
v/s Ratio Prot	c0.08	0.26		0.02	c0.52		0.01	c0.02		0.04	c0.04	
v/s Ratio Perm			0.01			0.08						0.01
v/c Ratio	0.90	0.39	0.02	0.52	0.88	0.14	0.17	0.26		0.44	0.46	0.06
Uniform Delay, d1	47.4	8.5	6.4	50.4	18.4	9.5	46.4	46.6		45.5	45.6	43.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	41.2	0.1	0.0	7.6	3.4	0.1	0.7	1.2		2.0	2.1	0.2
Delay (s)	88.7	8.6	6.4	58.0	21.8	9.6	47.1	47.8		47.6	47.7	44.1
Level of Service	F	A	A	E	C	A	D	D		D	D	D
Approach Delay (s)		16.6			21.3			47.6			46.2	
Approach LOS		B			C			D			D	
Intersection Summary												
HCM Average Control Delay			21.4			HCM Level of Service				C		
HCM Volume to Capacity ratio			0.79									
Actuated Cycle Length (s)			105.9			Sum of lost time (s)			16.0			
Intersection Capacity Utilization			80.2%			ICU Level of Service			D			
Analysis Period (min)			15									
c Critical Lane Group												

2030 Alternative 2 With Project - PM Peak Hour

138: Pacific Coast Hwy & Brookhurst

Synchro 6 Report

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 		  	 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1743		3433	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1743		3433	1863	1583
Volume (vph)	230	1493	10	20	2209	550	20	40	30	290	30	160
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	230	1493	10	20	2209	550	20	40	30	290	30	160
RTOR Reduction (vph)	0	0	4	0	0	181	0	24	0	0	0	140
Lane Group Flow (vph)	230	1493	6	20	2209	369	20	46	0	290	30	20
Turn Type	Prot		Perm	Prot		pm+ov	Split			Split		Perm
Protected Phases	7	4		3	8	6	2	2		6	6	
Permitted Phases			4			8						6
Actuated Green, G (s)	16.3	69.1	69.1	1.9	54.7	68.7	8.4	8.4		14.0	14.0	14.0
Effective Green, g (s)	16.3	69.1	69.1	1.9	54.7	68.7	8.4	8.4		14.0	14.0	14.0
Actuated g/C Ratio	0.15	0.63	0.63	0.02	0.50	0.63	0.08	0.08		0.13	0.13	0.13
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	264	3212	1000	31	2543	994	136	134		439	238	203
v/s Ratio Prot	c0.13	0.29		0.01	c0.43	0.05	0.01	c0.03		c0.08	0.02	
v/s Ratio Perm			0.00			0.19						0.01
v/c Ratio	0.87	0.46	0.01	0.65	0.87	0.37	0.15	0.34		0.66	0.13	0.10
Uniform Delay, d1	45.5	10.5	7.5	53.4	24.2	9.9	47.2	47.9		45.4	42.3	42.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	25.4	0.1	0.0	37.9	3.4	0.2	0.5	1.5		3.7	0.2	0.2
Delay (s)	70.9	10.6	7.5	91.3	27.6	10.1	47.7	49.4		49.1	42.5	42.4
Level of Service	E	B	A	F	C	B	D	D		D	D	D
Approach Delay (s)		18.6			24.6			49.0			46.5	
Approach LOS		B			C			D			D	
Intersection Summary												
HCM Average Control Delay			25.1			HCM Level of Service				C		
HCM Volume to Capacity ratio			0.79									
Actuated Cycle Length (s)			109.4			Sum of lost time (s)				16.0		
Intersection Capacity Utilization			80.4%			ICU Level of Service				D		
Analysis Period (min)			15									
c Critical Lane Group												

ALL-WAY STOP CONTROL ANALYSIS

General Information				Site Information	
Analyst	SA			Intersection	Lake Street/6th Street
Agency/Co.				Jurisdiction	
Date Performed	3/31/2009			Analysis Year	2030 Base Case+Project+Alt 2
Analysis Time Period	PM Peak				

Project ID

East/West Street: 6th Street

North/South Street: Lake Street

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
	L	T	R	L	T	R
Movement						
Volume (veh/h)	49	70	68	10	80	30
%Thrus Left Lane						

Approach	Northbound			Southbound		
	L	T	R	L	T	R
Movement						
Volume (veh/h)	44	290	30	40	255	114
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LTR		LTR	
PHF	1.00		1.00		1.00		1.00	
Flow Rate (veh/h)	187		120		364		409	
% Heavy Vehicles	0		0		0		0	
No. Lanes	1		1		1		1	
Geometry Group	1		1		1		1	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.3		0.1		0.1		0.1	
Prop. Right-Turns	0.4		0.3		0.1		0.3	
Prop. Heavy Vehicle	0.0		0.0		0.0		0.0	
hLT-adj	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
hRT-adj	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	-0.2		-0.1		-0.0		-0.1	

Departure Headway and Service Time

hd, initial value (s)	3.20		3.20		3.20		3.20	
x, initial	0.17		0.11		0.32		0.36	
hd, final value (s)	6.13		6.34		5.54		5.37	
x, final value	0.32		0.21		0.56		0.61	
Move-up time, m (s)	2.0		2.0		2.0		2.0	
Service Time, t _s (s)	4.1		4.3		3.5		3.4	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	437		370		614		643	
Delay (s/veh)	11.96		11.03		15.38		16.38	
LOS	B		B		C		C	
Approach: Delay (s/veh)	11.96		11.03		15.38		16.38	
LOS	B		B		C		C	
Intersection Delay (s/veh)	14.68							
Intersection LOS	B							

ALL-WAY STOP CONTROL ANALYSIS

General Information				Site Information	
Analyst	SA			Intersection	Lake Street/Orange Avenue
Agency/Co.				Jurisdiction	
Date Performed	3/31/2009			Analysis Year	2030 Base Case+Project+Alt 2
Analysis Time Period	PM Peak				

Project ID					
East/West Street:	Orange Avenue			North/South Street:	Lake Street

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
	L	T	R	L	T	R
Movement						
Volume (veh/h)	45	364	73	154	394	143
%Thrus Left Lane						

Approach	Northbound			Southbound		
	L	T	R	L	T	R
Movement						
Volume (veh/h)	118	148	164	44	232	63
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LTR		LTR	
PHF	1.00		1.00		1.00		1.00	
Flow Rate (veh/h)	482		691		430		339	
% Heavy Vehicles	0		0		0		0	
No. Lanes	1		1		1		1	
Geometry Group	1		1		1		1	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.1		0.2		0.3		0.1	
Prop. Right-Turns	0.2		0.2		0.4		0.2	
Prop. Heavy Vehicle	0.0		0.0		0.0		0.0	
hLT-adj	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
hRT-adj	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	-0.1		-0.1		-0.2		-0.1	

Departure Headway and Service Time

hd, initial value (s)	3.20		3.20		3.20		3.20	
x, initial	0.43		0.61		0.38		0.30	
hd, final value (s)	9.51		9.50		9.40		9.72	
x, final value	1.27		1.82		1.12		0.92	
Move-up time, m (s)	2.0		2.0		2.0		2.0	
Service Time, t _s (s)	7.5		7.5		7.4		7.7	
























Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	482		691		430		371	
Delay (s/veh)	170.11		403.28		114.44		59.83	
LOS	F		F		F		F	
Approach: Delay (s/veh)	170.11		403.28		114.44		59.83	
LOS	F		F		F		F	
Intersection Delay (s/veh)	221.50							
Intersection LOS	F							

2030 Alternative 2 With Project - PM Peak Hour

108: Atlanta & Beach

Synchro 6 Report

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	4998		1770	4934	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	1770	4998		1770	4934	
Volume (vph)	248	588	30	78	547	220	90	917	118	310	547	135
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	248	588	30	78	547	220	90	917	118	310	547	135
RTOR Reduction (vph)	0	0	21	0	0	176	0	13	0	0	34	0
Lane Group Flow (vph)	248	588	9	78	547	44	90	1022	0	310	648	0
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	18.2	31.6	31.6	7.3	20.7	20.7	7.9	27.3		21.6	41.0	
Effective Green, g (s)	18.2	31.6	31.6	7.3	20.7	20.7	7.9	27.3		21.6	41.0	
Actuated g/C Ratio	0.18	0.30	0.30	0.07	0.20	0.20	0.08	0.26		0.21	0.39	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	310	1077	482	124	706	316	135	1315		368	1949	
v/s Ratio Prot	c0.14	0.17		0.04	c0.15		0.05	c0.20		c0.18	0.13	
v/s Ratio Perm			0.01			0.03						
v/c Ratio	0.80	0.55	0.02	0.63	0.77	0.14	0.67	0.78		0.84	0.33	
Uniform Delay, d1	41.1	30.1	25.3	46.9	39.3	34.2	46.7	35.4		39.5	21.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	13.7	0.6	0.0	9.6	5.3	0.2	11.8	3.0		15.9	0.1	
Delay (s)	54.8	30.7	25.3	56.5	44.7	34.4	58.4	38.4		55.4	22.0	
Level of Service	D	C	C	E	D	C	E	D		E	C	
Approach Delay (s)		37.4			43.1			40.0			32.4	
Approach LOS		D			D			D			C	
Intersection Summary												
HCM Average Control Delay			38.1			HCM Level of Service				D		
HCM Volume to Capacity ratio			0.80									
Actuated Cycle Length (s)			103.8			Sum of lost time (s)			16.0			
Intersection Capacity Utilization			79.7%			ICU Level of Service			D			
Analysis Period (min)			15									
c Critical Lane Group												